

**Mechanized Aids To Management
Engineering And Administration
Data Acquisition System (EADAS)
Position Practice
Load EADAS Generic**

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1. GENERAL DESCRIPTION

1.01 This position practice contains instructions for bringing that portion of CCU equipment required for loading the EADAS Generic to a ready state; and for actually loading the Generic. It is presumed that the system will have power applied, but that peripheral devices may be in a powered-down state. The devices for which procedures are given include: the Central Processing Unit (CPU), the fixed-head and moving-head disk units, and the magnetic tape unit (MTU).

1.02 The EADAS generic tape is divided into three sections known as SYSBAK, the Generic Program and System Definitions.

A. **SYSBAK** appears first on the EADAS generic tape. Like the Generic Program, SYSBAK is a computer program. Unlike the Generic Program it can only accomplish three very limited functions.

1. It can force the CCU to read *both* the Generic Program *and* the System Definitions from the EADAS generic tape into the computer's memory.
2. It can force the CCU to read *only* the Generic Program into the computer's memory from the EADAS' generic tape. Any System Definitions already in the computer would remain unchanged.
3. It can force the Generic Program to momentarily stop operating while it (SYSBAK) *writes* a copy of itself, the current Generic Program, and all System Definitions to a blank tape.

B. **The Generic Program** appears after SYSBAK on the EADAS generic tape. It constitutes all those instructions which tell the CCU equipment how to process incoming traffic data.

C. **The System Definitions** are supplied by the Associated Company. They explain to the Generic Program the type of incoming data to expect and allow the Associated Company to tailor the Generic Program's functions to its needs.

1.03 This position practice contains detailed instructions for using SYSBAK to perform functions 1 and 2 (the loading functions) shown above. The third function, writing a copy of the EADAS Generic Program and associated System Definitions, is described in its logical place at the end of the *Supply, Modify, and Verify System Definitions* position practice.

1. GENERAL DESCRIPTION (Continued)

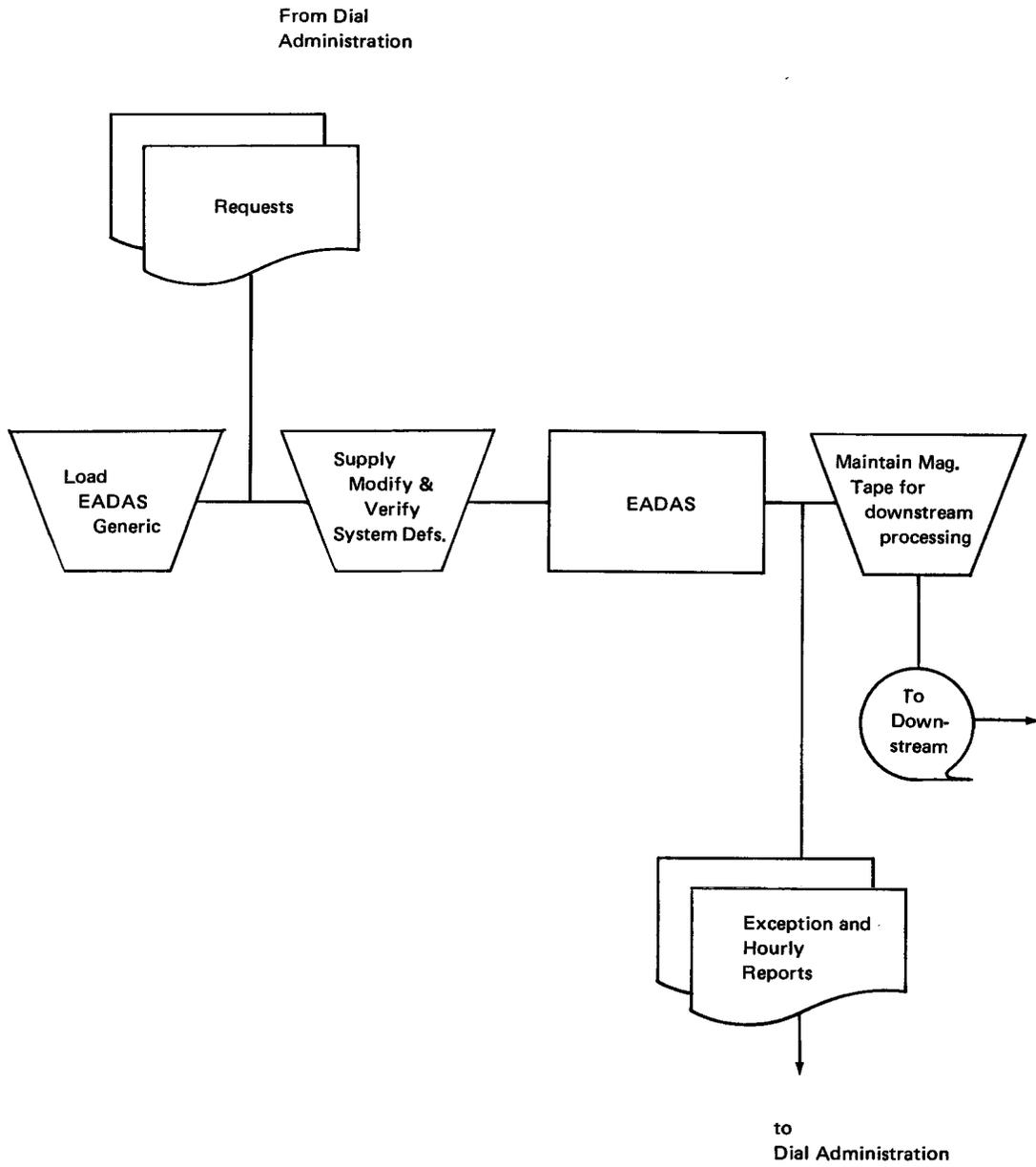
The procedures discussed in this practice are broken down as follows:

- A. In order to load the EADAS generic, the CPU and fixed and moving head discs must be brought to a ready state. This is described in Task 1. Task 1A gives the procedures for bringing the CPU and disc drives to a ready state when the system has been halted for some reason and the EADAS program is intact on disc.
- B. The Generic Tape must be mounted on the tape drive to be used. This set of procedures is given in Task 2.
- C. The SYSBAK program must be loaded from the Generic Tape into the System's memory. The procedures in Task 3 accomplish this function. Task 3A gives the procedures for loading SYSBAK from the Generic Tape for a running System.
- D. The first time the Generic Program is to be read into the CCU equipment, system constraints require that the EADAS Generic Tape be read as if System Definitions existed. Reading the Generic Program and the System Definitions (the first function of SYSBAK) is designated as Task 4A.

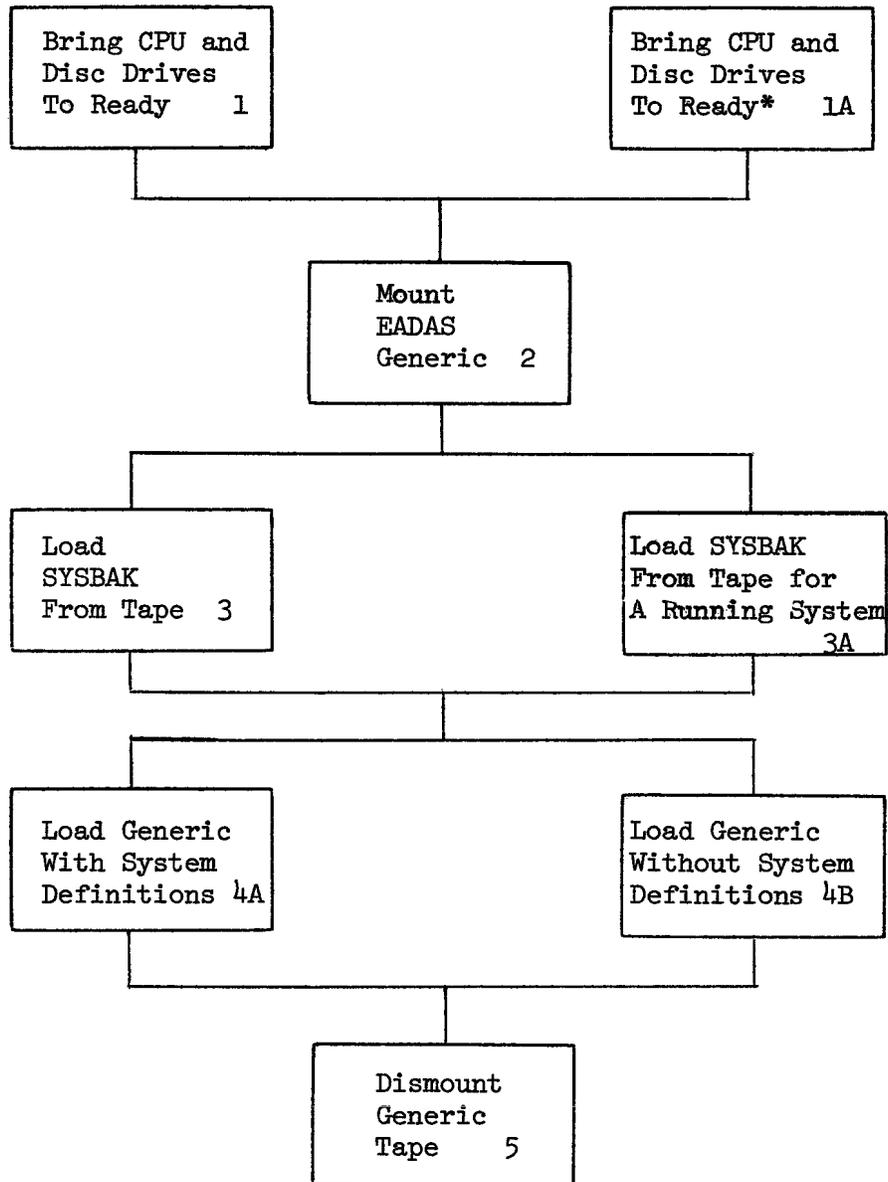
From time to time an improved Generic Program may be released by Bell Telephone Laboratories. When this happens, you must load the New Generic Program but save the existing System Definitions. Reading the Generic Program without System Definitions is the second function of SYSBAK designated as Task 4B.

- E. The Generic Tape must be dismounted from the tape drive. This procedure is designated Task 5.

2. POSITION FLOWCHART AND MEDIA LEGEND.



3. POSITION DIAGRAM



* When System Has Been Halted and Program is Intact on Disc

4. POSITION PROCEDURES

TASK 1: BRING CPU AND DISK DRIVES TO READY

CAUTION: If the system has been without power for 24 hours or more, go to Corrective Procedure #1.

1. Turn the key in the programmer's console from OFF to POWER.
2. Check to see if indicator lights on programmer's console are on, and the processor fans have come on.

****If the indicators have not come on, go to Corrective Procedure #2.**

****If a moving head disk pack is to be mounted or replaced, go to Corrective Procedure #3.**

4. POSITION PROCEDURES (Continued)

TASK 1A: BRING CPU AND DISC DRIVES TO READY WHEN SYSTEM HAS BEEN HALTED
AND EADAS PROGRAM IS INTACT ON DISC

NOTE: If the system has been halted for some reason (such as maintenance) and the EADAS program is intact on disc, the system can be restarted in the following manner.

1. Set 773300 (octal) into the address register.
2. Depress the LOAD ADDRESS switch.
3. Depress the START key.

4. POSITION PROCEDURES (Continued)

TASK 2: MOUNT THE EADAS GENERIC TAPE

1. Select the EADAS Generic Tape to be loaded and log it out according to local procedures.
2. Press PWR ON switch. PWR and OFF-LINE lights will light.
3. Place LOAD/BR REL switch in center position. Lower hub assembly will not move.
4. Ensure that the Generic Tape does not have a write enable ring inserted in the groove on the back of the reel. NO RING, NO WRITE.
5. Place the tape reel over the lower reel hub with the groove facing the tape drive. Tape should feed from bottom of reel.
6. Lock the reel in place by turning the large knob in the center of the hub in a clockwise direction.
7. Set the UNIT SELECT thumbwheel switch to zero (Ø).
8. Place the LOAD/BR REL switch in the BR REL position. This allows the reel to be moved by hand. The BR REL light will come on.
9. Unwind about 3 feet of tape from reel. Handle the tape as little as possible and do not let it hit the floor.
10. Thread the tape (maintaining slack), then wind it onto the top reel taking up the slack (about 3 turns).
11. Press LOAD/BR REL button to LOAD. The vacuum motors will come on. The tape will move slightly and the LOAD light will come on.
12. Press FWD/REW/REV button to FWD.

4. POSITION PROCEDURES (Continued)

13. Press the START switch.

The START switch should be rocked back to STOP position then forward to START.

Tape will move forward, and stop. LD PT light will come on.

****If tape continues to move forward for more than 10 seconds go to Corrective Procedure #4.**

14. Press ON-LINE switch.

RDY light will come on.

****If the SEL light is not on:**

1. Ensure that the unit select thumbwheel switch is set to \emptyset .
2. Ensure that the unit select thumbwheel switch on the backup tape drive is set to a number other than \emptyset .

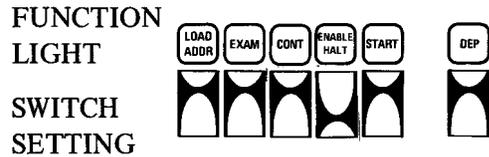
4. POSITION PROCEDURES (Continued)

TASK 3: LOAD SYSDAK FROM THE GENERIC TAPE

1. Set the Switch Register to octal 773330.

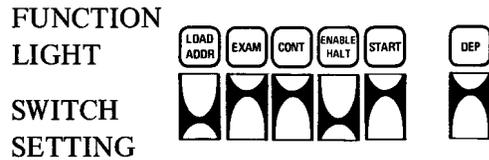


2. Move ENABLE/HALT key to HALT (down) position.

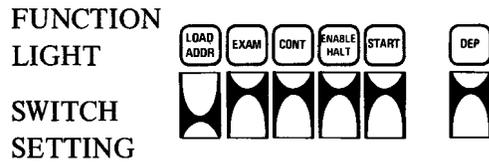


Note: The DEP key is never used and should always remain in the UP position.

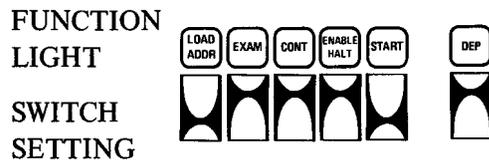
3. Depress the LOAD ADDR key.



4. Lift the ENABLE/HALT key to ENABLE.



5. Depress the START key.



**If the tape does not move (LOAD PT light on tape drive should be out) when the START key is depressed, repeat steps 1-5.

4. POSITION PROCEDURES (Continued)

TASK 3A: LOAD SYSBAK FROM THE GENERIC TAPE FOR A RUNNING SYSTEM

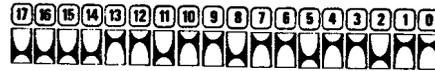
1. Type EM:SYSBAK on CCU TTY. System responds CONFIRM.
2. Type EADAS.

End of Task

4. POSITION PROCEDURES (Continued)

TASK 4A: LOAD THE GENERIC PROGRAM WITH SYSTEM DEFINITIONS

1. Set the switch register to octal 033333.



2. Depress the CONTINUE key.



** If SYSBAK cannot read the Generic Program and System Definitions a message will be printed on the CCU teletype. Go to Corrective Procedure #5, then return to this point.

When tape has rewound,
System responds
WILL SYSTEM HAVE ACCUMULATED DATA CHANNELS?

3. Reply Y for yes
N for no.

If response is N, system will respond as follows:

** SELECTED CONFIGURATION ALLOWS FOR XX SINGLE-EVENT CHANNELS AND NO BUFFERS FOR ACCUMULATED DATA (where XX is a preselected number based on sites' total core availability)
Go to Step 5.

If response if Y, and basic system core available is only 48K, the system will respond:

** SELECTED CONFIGURATION ALLOWS FOR 50 SINGLE-EVENT CHANNELS AND 26 BUFFERS FOR ACCUMULATED DATA
Go to Step 5.

If response is Y, and basic system core available is greater than 48K, the system will respond:

4. POSITION PROCEDURES (Continued)

SELECT SYSTEM CHANNEL CONFIGURATION
 *** CONSULT DFMP, DIV. D, SECT. 4E
 FOR INSTRUCTIONS.
 REPLY A, B, C, OR D.
 For reply see table below and then
 proceed to Step 4.

<u>Letter Response</u>	<u>Single-Event Channels</u>	<u>Buffers for Accumulated Data</u>
A	99	NO
B	90	26
C	72	52
D	50	78

4. Respond with appropriate letter from table above.

If response is valid, system will respond:

** SELECTED CONFIGURATION ALLOWS FOR
 XX SINGLE-EVENT DATA CHANNELS
 YY BUFFERS FOR ACCUMULATED DATA
 (where XX and YY are as indicated
 in table above)
 EADAS ISS XX (where XX is the
 current generic issue number)
 Go to Step 5.

If response is invalid (such as "E"),
 system will respond:
 REPLY INVALID - LET'S TRY AGAIN

The system will now repeat the question
 sequence beginning with
 SELECT SYSTEM CHANNEL CONFIGURATION.
 Return to Step 3.

5. Enter the time and date on the CCU teletype per system request.

Format:

Time - TI:HH:MM:SS!

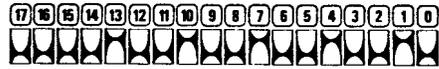
Date - DA:MM/DD/YY, * first two
 characters of day! * optional and with
 no day given the system will assume it
 is Sunday (SU)
 MO = Monday, TU = Tuesday, etc.

6. Set switch to normal.

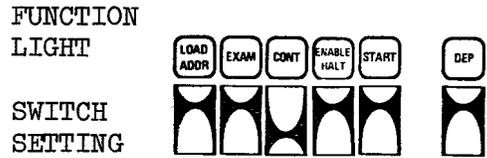
4. POSITION PROCEDURES (Continued)

TASK 4B: LOAD THE GENERIC PROGRAM WITHOUT SYSTEM DEFINITIONS

1. Set the switch register to octal 022222.



2. Depress the CONTINUE key.



** If SYSDAK cannot read the Generic Program, a message will be printed on the CCU teletype. Go to Corrective Procedure #5, then return to this point.

When tape has rewound,
System responds
WILL SYSTEM HAVE ACCUMULATED DATA CHANNELS?

3. Go to Task 4A, Step 3 and follow the procedures there.

4. POSITION PROCEDURES (Continued)

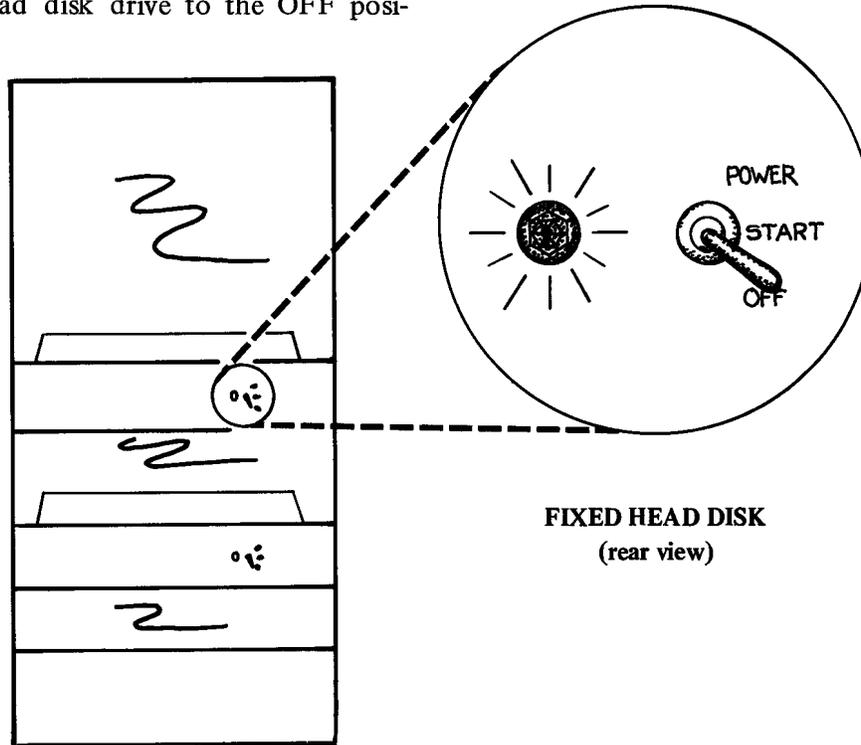
TASK 5: DISMOUNT THE EADAS GENERIC TAPE

1. Move ON LINE/OFF LINE switch to OFF LINE. OFF LINE light will light, RDY and SEL lights will go out.
2. Move LOAD/BR REL switch to BR REL. Vacuum motors will power down. LD PT light will go off.
3. Unwind tape from the top reel as you are winding the tape onto the bottom reel.
4. Move LOAD/BR REL switch to middle position.
5. Release and remove the reel by turning the hub knob counterclockwise.
6. Enter the required information on the tape log according to local procedure.
7. Place the tape in the library location reserved for EADAS Generic Tapes.

5. CORRECTIVE PROCEDURES

C.P. 1: POWER UP CPU DOWN 24 HOURS OR LONGER.

1. Ensure that the key on the programmer's console has been turned to OFF.
2. Flip the toggle switch on the rear of each fixed head disk drive to the OFF position.



3. Turn the key on the programmer's console from OFF to POWER.
4. Lift the toggle switches from OFF to START/POWER after the system has run in this mode for 30 minutes.
5. Return to Task 1, step 3.

Allow the system to run a full 30 minutes in this mode.

5. CORRECTIVE PROCEDURES (Continued)

C.P. 2: CORRECT CPU FAULTY INDICATOR CONDITION

1. Turn key from POWER to OFF.
2. Verify that Circuit Breakers have been tripped, i.e., Circuit Breakers switch in OFF position. **If not, notify the person responsible for maintenance.
3. Reset the Circuit Breakers to ON position. **If you have previously reset the Circuit Breakers, and they have tripped again, notify the person responsible for maintenance.
4. Return to Task 1, Step 1.

5. CORRECTIVE PROCEDURES (Continued)

**C.P. 3: BRING MOVING HEAD DISK
TO READY**

****If no disk pack is currently mounted, open the disk drive door then go directly to Step 5.**

1. Press the RUN/LOAD switch to LOAD.

2. Wait approximately 90 seconds for a click which indicates that the disk has stopped spinning.

Lock flag will retract.

3. Open the disk drive door.

Grasp door handle and pull toward you and down.

4. Grasp disk cartridge firmly and pull it straight out.

Labeled handle should face operator with printing right side up.

5. Slide the new disk pack into the drive.

6. Close the disk drive door by firmly lifting the handle all the way up.

7. Press the RUN/LOAD switch to RUN.

RDY light will appear in 8 seconds.

****If the light does not come on, notify the person responsible for maintenance.**

****If the WRITE PROTECT light is lit, press the button to extinguish the light.**

5. CORRECTIVE PROCEDURES (Continued)

C.P. 4: CORRECT DEFECTIVE TAPE OPERATION

1. Press START/STOP button to STOP.
2. Press FWD/REW/REV button to REV.
3. Press START/STOP button to START.

****Within 10 seconds the tape should stop and the LD PT light come on. If this does not happen, substitute a new Generic Tape. If it also fails to work properly, the drive may be defective. Notify the person responsible for maintenance.**

5. CORRECTIVE PROCEDURES (Continued)

C.P. 5: CORRECT LOADING ERROR

Read TTY Error Message and take corrective action as defined in the Statement Table below:

If teletype error message is:	Go to:
1. TAPE UNIT Ø NOT READY	Corrective Procedure 5a
2. INVALID CODE	Corrective Procedure 5b
3. WRITE PROTECT ON	Corrective Procedure 5c
4. ERROR-HIT CONTINUE TO RESTART	Corrective Procedure 5d
5. TAPE NOT IN EADAS FORMAT	Corrective Procedure 5e
6. MOVING HEAD DISK NOT READY, OR WRITE PROTECTED. MOVING HEAD DISK IN WRITE PRO- TECT MODE.	Corrective Procedure 5f

5. CORRECTIVE PROCEDURES (Continued)

5a: CORRECT "TAPE UNIT Ø NOT READY" MESSAGE

1. Ensure that tape has been properly mounted.
2. Verify that Unit Select thumbwheel switch is set to Ø.
3. Press the CONT(inue) key to restart SYSDAK.

**If SYSDAK fails again notify the EADAS administrator of the problem and the corrective actions taken.

5b: CORRECT "INVALID CODE" MESSAGE

1. Verify that switch register setting is octal Ø33333 for task 4A or Ø22222 for task 4B.
2. Press CONT(inue) key to restart SYSDAK.

**If SYSDAK fails again notify the EADAS administrator of the problem and the corrective actions taken.

5c: CORRECT "WRITE PROTECT ON" MESSAGE

1. Open the front door of the fixed head disk unit.
2. Verify that all 16 switches on the lower right panel are in the right-hand positions.
3. Press the CONT(inue) key to restart SYSDAK.

**If SYSDAK fails again, notify the EADAS administrator of the problem and also of corrective actions taken.

5d: CORRECT "ERROR-HIT CONTINUE TO RESTART" MESSAGE

Press the CONT(inue) key to restart SYSDAK.

**If SYSDAK fails again, notify the EADAS administrator of the problem and also of corrective actions taken.

5. CORRECTIVE PROCEDURES (Continued)

5e: CORRECT "TAPE NOT IN EADAS FORMAT" MESSAGE

1. Verify that the correct tape has been mounted.
2. Check the switch register to ensure that it is set to 033333 for task 4A or at 022222 for task 4B.
3. Press the CONT(inue) key to restart SYSDAK.

5f: CORRECT "MOVING HEAD DISK NOT READY OR WRITE PROTECTED "

- | | |
|---|---|
| <ol style="list-style-type: none">1. Verify that RDY light on the moving head disk is on. | <p>**If RDY light is off:</p> <ol style="list-style-type: none">1. Ensure that disk is properly fitted into disk drive and that door is fully closed.2. Verify that disk has stopped.3. Press the RUN/LOAD switch to RUN. (If the switch is already in the RUN position, move it to LOAD, and back to RUN.)4. Wait 8 seconds for RDY light. |
| <ol style="list-style-type: none">2. Verify that the WRITE PROTECT light is off. | <p>**If the WRITE PROTECT light is on, push the light/button to extinguish the light.</p> |
| <ol style="list-style-type: none">3. Press the CONT(inue) key to restart SYSDAK. | <p>**If SYSDAK fails again, notify the EADAS administrator of the problem and also of corrective actions taken.</p> |

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